



# UNITED STATES PATENT AND TRADEMARK OFFICE

*cm*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,068	12/29/2003	Akira Minami	3408.68821	7937

7590 09/08/2006

Patrick G. Burns, Esq.  
GREER, BURNS & CRAIN, LTD.  
Suite 2500  
300 South Wacker Dr.  
Chicago, IL 60606

EXAMINER
----------

NGO, HUNG V

ART UNIT	PAPER NUMBER
----------	--------------

2831

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/749,068

Applicant(s)

MINAMI, AKIRA

Examiner

Hung V. Ngo

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action, or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) \*
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-10, 13, 14, 16, 18, 19, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kiyoshi (JP 2001-022899).

Re claim 1, Kiyoshi discloses a composite storage apparatus comprising:

a storage device (Fig 6) which has a unit for a first interface (55); and

a card board (51) having units for the first interface and a second interface (Fig 2), wherein said card board further comprises:

an interface conversion circuit (56) for converting said second interface into said first interface,

a connector (43) which is connected to said interface conversion circuit (Fig 2),  
and

a memory card device (41, 42) which is connected to said interface conversion circuit (Fig 2).

Re claim 2, wherein said memory card device comprises:

a connector (3e) of a memory card; and

a memory card control circuit (54) which is connected to said connector of said memory card and controls at least one of read and write of said memory card.

Re claim 4, further comprising a cable for connecting the connector of said card board and the connector of said storage device in the case of an external connection with said second interface (Fig 7).

Re claim 5, further comprising a cable for connecting the connector of said card board and the connector of said storage device in the case of an external connection with said first interface (Fig 7).

Re claim 6, further comprising setup means for setting the master/slave between said memory card and said storage device and disposed in said card board (Fig 7).

Re claim 7, wherein said card board mounts said memory card device and said interface conversion circuit on the single side thereof (Fig 3).

Re claim 8, wherein said storage device is comprised of a disk drive (Fig 5).

Re claim 9, wherein said storage device is comprised of a removable disk drive (Fig 5).

Re claim 10, wherein said disk drive comprises a disk drive mechanism (Fig 6); and a drive board (53) on which a circuit for controlling said disk drive mechanism is mounted.

Re claim 13, a card board having first (55) and second interfaces,  
Comprising an interface conversion circuit (56) for converting said second interface into said first interface,

Art Unit: 2831

a connector (43) which is connected to said interface conversion circuit, for connecting with the outside using said first interface (Fig 2); and

a memory card device (41, 42) which is connected to said interface conversion circuit and said connector.

Re claim 14, wherein said memory card device further comprises

a connector (3e) of a memory card; and

a memory card control circuit (54) which is connected to said connector of said memory card and controls at least one of read and write of said memory card

re claim 16, wherein the connector and a connector of a storage device are connected with a cable in the case of an external connection with said second interface (Fig 7).

Re claim 18, further comprising setup means for setting the master/slave between said memory card and an external storage device (Fig 7).

Re claim 19, wherein said card board mounts said memory card device and said interface conversion circuit on a single face thereof (Fig 2).

Re claim 22, wherein the connector of said card board and a connector of a removable storage device are connected with a cable in the case of an external connection with said second interface (Fig 7).

Claims 1-3, 11-15, 20, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi (US 6,199,122)

Re claims 1, 13, Kobayashi discloses a composite storage apparatus comprising:  
a storage device (storage 12) which has a unit for a first interface; and

Art Unit: 2831

a card board (Fig 1) having units for the first interface and a second interface (121), wherein said card board further comprises:

an interface conversion circuit (122, 124) for converting said second interface into said first interface,

a connector (125) which is connected to said interface conversion circuit (Fig 1), and

a memory card device (13) which is connected to said interface conversion circuit (Fig 1).

Re claims 2, 14 wherein said memory card device comprises:

a connector (132) of a memory card; and

a memory card control circuit (122) which is connected to said connector of said memory card and controls at least one of read and write of said memory card

Re claims 3, 15 wherein the connector of said memory card comprises a plurality of connectors which support different types of memory cards, and said memory card control circuit comprises a memory card control circuit for controlling at least one of read and write of said respective different types of memory cards (Figs 1, 10, 11).

Re claims 11, 20, wherein said first interface is a parallel interface (55), and said second interface is a serial interface (USB 121)(Fig 1).

Re claims 12, 21, wherein said first interface is an ATA/ATAPI interface, and said second interface is a USB interface (USB 121)(Fig 1).

***Allowable Subject Matter***

Art Unit: 2831

The indicated allowability of claims 1-22 is withdrawn in view of the newly discovered reference(s) to Kobayashi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung V. Ngo whose telephone number is (571) 272-1979. The examiner can normally be reached on Monday to Thursday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on (571) 272-2800 EXT 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HVN  
08-30-06

Hung V Ngo

**HUNG V. NGO  
PRIMARY EXAMINER**